ABSTRACT OF THE DISCLOSURE

The thermally treated carbide materials are made by placing a carbide within a thermal control apparatus and subjecting the carbide to one or more thermal cycles. The first thermal cycles involves introducing a cryogenic material into the thermal control apparatus decreasing the carbide temperature, while preventing over-stressing of the carbide, to a first target temperature at a first temperature rate. The carbide temperature is then increased to a second target temperature at a second temperature rate. The second thermal cycle involves introducing the cryogenic material to decrease the carbide temperature, while preventing over-stressing, to a third temperature at a third temperature rate ranging. The temperature is then increased to a fourth temperature at a fourth temperature rate. The result of the process is a treated carbide without fractures.